

PATENT  
Customer Number 22,852  
Attorney Docket No. 7040.0120.00

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
Antonio PRONI et al. )  
Serial No.: Not yet assigned ) Group Art Unit: Not yet assigned  
Filed: February 13, 2002 ) Examiner: Not yet assigned  
For: CLOSED MIXER WORKING )  
PROCESS, WITH STROKE )  
CONTROL RAM )

Assistant Commissioner for Patents  
Washington, DC 20231

Siri:

## PRELIMINARY AMENDMENT

Prior to the examination of the above-captioned application, please amend this application as follows:

## IN THE TITLE:

Please amend the title, as follows:

## CLOSED MIXER WORKING PROCESS WITH STROKE-CONTROL RAM

## IN THE SPECIFICATION:

Please amend the specification, as follows:

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

Add two section headings, a section subheading, and a paragraph immediately after the new title CLOSED MIXER WORKING PROCESS, WITH STROKE-CONTROL RAM, as follows:

**--CROSS-REFERENCE TO RELATED APPLICATIONS**

Applicants claim the right of priority under 35 U.S.C. § 119(a) - (d) based on patent application No. 01830112.7, filed February 19, 2001, in the European Patent Office; further, Applicants claim the benefit under 35 U.S.C. § 119(e) based on prior-filed, copending provisional application No. 60/281,789, filed April 6, 2001, in the U.S. Patent and Trademark Office; the contents of both of which are relied upon and incorporated herein by reference.

**BACKGROUND OF THE INVENTION**

**Field of the Invention--**

Page 1, line 9, add section subheading --Description of the Related Art-- prior to the start of the paragraph beginning “Closed mixers, also known as discontinuous mixers . . .”

Page 2, line 26, add section heading --SUMMARY OF THE INVENTION--prior to the start of the paragraph beginning “The present invention aims at providing a method . . .”

Page 3, line 27, add section heading --BRIEF DESCRIPTION OF THE DRAWINGS-- prior to the start of the paragraph beginning “Further features and advantages . . .”

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)

Page 4, line 16, add section heading --DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS-- prior to the start of the paragraph beginning "With reference to the first figure . . . ."

Delete page 13 in its entirety. Add a new page 13 after the claims, adding the following ABSTRACT OF THE DISCLOSURE. A new, separate page 13 including the ABSTRACT OF THE DISCLOSURE is enclosed.

--ABSTRACT OF THE DISCLOSURE

A closed mixer includes a mixing chamber, a pair of rotors, and a pressing ram. The pressing ram is movable between a resting condition, which allows introduction of material into the mixing chamber, and a working condition. A method of processing polymer-based mixtures and compounds in the closed mixer includes the steps of introducing material into the mixing chamber, moving the pressing ram from the resting condition to an upper end-of-stroke position, and moving the pressing ram from the upper end-of-stroke position to a lower end-of-stroke position. A position-time profile of the pressing ram is controlled during the step of moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position.--

IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claims 1-10, and add new claims 11-20, as follows:

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)

--11. (new) A method of processing polymer-based mixtures and compounds in a closed mixer, wherein the mixer comprises:

a mixing chamber;

a pair of rotors; and

a pressing ram;

wherein the pressing ram is movable between a resting condition, which allows introduction of material into the mixing chamber, and a working condition;

the method comprising the steps of:

introducing material into the mixing chamber;

moving the pressing ram from the resting condition to an upper end-of-stroke position;

and

moving the pressing ram from the upper end-of-stroke position to a lower end-of-stroke position;

wherein a position-time profile of the pressing ram is controlled during the step of moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position.

12. (new) The method of claim 11, wherein control of the position-time profile of the pressing ram is initiated when the pressing ram contacts the material.

13. (new) The method of claim 11, wherein the position-time profile of the pressing ram is controlled by regulating a control pressure of the pressing ram to follow a predetermined reference position-time profile.

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)

14. (new) The method of claim 11, wherein the step of moving the pressing ram from the resting condition to the upper end-of-stroke position is preceded by a step of introducing into the mixing chamber at least one reinforcing filler of a polymer base, and wherein the step of moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position occurs during incorporation of the at least one reinforcing filler into the polymer base.

15. (new) The method of claim 14, wherein the pressing ram reaches the lower end-of-stroke position at an end of incorporation of the at least one reinforcing filler into the polymer base.

16. (new) The method of claim 15, wherein plasticizers of the polymer base are introduced into the mixing chamber after the pressing ram has reached the lower end-of-stroke position.

17. (new) The method of claim 14, wherein the at least one reinforcing filler of the polymer base comprises one or more of carbon black and silica.

18. (new) The method of claim 11, wherein the position-time profile of the pressing ram is a direct processing parameter.

19. (new) The method of claim 11, wherein the material introduced into the mixing chamber comprises a crosslinking system for a polymer-based mixture.

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)

20. (new) The method of claim 11, wherein the material introduced into the mixing chamber comprises a mixture.--

**REMARKS**

Applicants submit this Preliminary Amendment together with an Appendix to Amendment Dated February 11, 2002, and a patent application under 37 C.F.R. § 1.53(b).

In this Preliminary Amendment, Applicants amend the title and add section headings, section subheadings, and an Abstract of the Disclosure to conform to U.S. practice. Additionally, Applicants add claims to the right of priority and benefit. Additionally, Applicants cancel, without prejudice or disclaimer, claims 1-10, and add new claims 11-20, which include the same subject matter as the original claims, to improve clarity. The originally-filed specification, claims, abstract, and drawings fully support the amendments to the specification and the addition of new claims 11-20. No new matter was introduced.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.



By:

Lawrence F. Galvin  
Reg. No. 44,694

Dated: February 13, 2002

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

## ABSTRACT OF THE DISCLOSURE

A closed mixer includes a mixing chamber, a pair of rotors, and a pressing ram. The pressing ram is movable between a resting condition, which allows introduction of material into the mixing chamber, and a working condition. A method of processing polymer-based mixtures and compounds in the closed mixer includes the steps of introducing material into the mixing chamber, moving the pressing ram from the resting condition to an upper end-of-stroke position, and moving the pressing ram from the upper end-of-stroke position to a lower end-of-stroke position. A position-time profile of the pressing ram is controlled during the step of moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position.

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FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)

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**APPENDIX TO PRELIMINARY AMENDMENT DATED FEBRUARY 13, 2002**

**Amendments to the Title**

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CLOSED MIXER WORKING PROCESS[,] WITH STROKE-CONTROL RAM

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Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)

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HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP